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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/734,836
Filing Date: December 12, 2003
Appellant(s): SHERRETT ET AL.

James Douglas Miller
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/29/06 appealing from the Office action mailed 4/19/06.

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(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| | | |
|---------|-------------|--------|
| 4368226 | MUCARIA | 1-1983 |
| 4459789 | FORD | 7-1984 |
| 6108999 | SMITH ET AL | 8-2000 |
| 5784853 | HOOD ET AL | 7-1998 |

6286288

FRANCE

9-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-5, 10, 13, 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mucaria (4368226).

Mucaria shows an impact resistant glass structure comprising a generally planar glass first layer (3, 5, 4) having an outer edge, a generally planar impact resistant plastic second layer (9) spaced from and substantially parallel with the first layer, the second layer having an outer edge, a generally planar glass third layer (6,8,7) with a laminate film (8) disposed on a surface thereof spaced from and substantially parallel with the first and second layer, the third layer having an outer edge, a first spacer (10, left) disposed between the first layer and the second layer adjacent the respective outer edge thereof, a second spacer (10, right) disposed between the second layer and the third layer adjacent the outer edges thereof, the outer edge of the first, the second, and the third layer are adapted to be disposed in a window casing (inherently capable of being adapted to do so), a first sealant (19) disposed between the first layer and the second layer, and between the second layer and the third layer adjacent the respective outer edges thereof, a second sealant (18) disposed between at least the first layer and the third layer adjacent the

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respective outer edges thereof, at least one of the first and second sealant at least partially surround the first spacer and the second spacer, the second layer being a polycarbonate, the outer edge of the second layer (9) is spaced inwardly from respective outer edges of the first layer and the third layer, the first sealant and the second sealant (19, 18) hold the first and second spacers in place and militate against the separation of the first layer, the second layer, and the third layer, the film (8) is disposed on one of the inner surface of the third layer.

3. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Mucaria (4368226).

Mucaria shows an impact resistant glass structure comprising a generally planar glass first layer (3, 5, 4) having an outer edge, a generally planar impact resistant plastic second layer (9) spaced from and substantially parallel with the first layer, the second layer having an outer edge, a generally planar laminated glass third layer (6,8,7) spaced from and substantially parallel with the first and second layer, the third layer having an outer edge, a first spacer (10, left) disposed between the first layer and the second layer adjacent the respective outer edge thereof, a second spacer (10, right) disposed between the second layer and the third layer adjacent the outer edges thereof, the outer edge of the first layer, the outer edge of the second layer, and the outer edge of the third layer are adapted to be disposed in a window casing (inherently capable of being adapted to do so), a first sealant (19) disposed between the first layer and the second layer, and between the second layer and the third layer adjacent the respective outer edges thereof, a second sealant (18) disposed between at least the first layer and the third layer adjacent the respective outer edges thereof, the first sealant and the second forming a vapor barrier between at least one of a space formed between the first layer and the second layer and the atmosphere, and a space formed between the second layer and the third layer and the atmosphere.

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4. Claim 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mucaria (4368226).

Mucaria shows an impact resistant glass structure comprising a generally planar glass first layer (3, 5, 4) having an outer edge, a generally planar impact resistant plastic second layer (9) spaced from and substantially parallel with the first layer, the second layer having an outer edge, a generally planar glass third layer (6,8,7) with a laminate film (8) disposed on a surface thereof spaced from and substantially parallel with the first and second layer, the third layer having an outer edge, a first spacer (10, left) disposed between the first layer and the second layer adjacent the respective outer edge thereof, a second spacer (10, right) disposed between the second layer and the third layer adjacent the outer edges thereof, the outer edge of the first layer, the outer edge of the second layer, and the outer edge of the third layer are adapted to be disposed in a window casing (inherently capable of being adapted to do so), a first space is formed between the first layer and the second layer and a second space is formed between the second layer and the third layer, and communication between the first and second space is militated against, a first sealant (19) disposed between the first layer and the second layer, and between the second layer and the third layer adjacent the respective outer edges thereof, a second sealant (18) disposed between at least the first layer and the third layer adjacent the respective outer edges thereof.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria (4368226) in view of France (6286288).

Mucaria shows all the claimed limitations except for the first sealant being a polyisobutylene sealant.

France discloses polyisobutylene sealant as having an excellent moisture barrier properties (col 3 line 13-15).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show the first sealant being a polyisobutylene sealant because polyisobutylene sealant has excellent moisture barrier properties as taught by France, and the excellent moisture barrier property is desired by Mucaria's disclosure as it forms a moisture barrier.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of France as applied to claim 4 above, and further in view of Hood et al (5784853).

Mucaria as modified shows all the claimed limitations except for the second sealant being a polyurethane sealant.

Hood et al discloses sealant (44) being polyurethane, polyurethane sealant provides for high modulus, low creep, low moisture vapor transmitting properties (col 6 lines 33-40).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's modified structure to show the second sealant being a polyurethane sealant because polyurethane provides for a high modulus, low creep, low moisture

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vapor transmitting sealant between glass as taught by Hood et al and thus desired for forming a vapor barrier in an insulating glass unit.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of Hood et al (5784853).

Mucaria shows all the claimed limitations except for a gas filled air space being formed between at least one of the first layer and the second layer, the second layer and the third layer.

Hood et al discloses filling interspaces between layers of an insulating unit with an insert low heat transfer gas to reduce heat conductance across the insulating unit with (col 6 lines 13-20).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show a gas filled air space being formed between at least one of the first layer and the second layer, the second layer and the third layer because filling the interspaces with an inert low heat transfer gas would reduce heat conductance across the insulating unit as taught by Hood et al.

9. Claims 8, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of Hood et al (5784853).

Mucaria shows all the claimed limitations except for the first and second layer being an annealed glass.

Hood et al discloses the first and second layer being an annealed glass (col 4 line 36, glass tempered).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show the first and second layer being an annealed

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glass as taught by Hood et al because annealing the glass would enhance the properties of the first and third layers by improving the scratch resistant and element resistant properties of the glass layers.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of Hood et al (5784853).

Mucaria shows all the claimed limitations except for the first layer having a low-E material deposited thereon.

Hood et al discloses the first layer having a low-E material deposited thereon (col 4 lines 29-36, coated, tinted, pigmented) to promote heat rejection, to control UV transmission.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show the first layer having a low-E material deposited thereon because it would allow for the promoting of heat rejection and UV transmission control as taught by Hood et al.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of Smith et al.

Mucaria shows all the claimed limitations except for the second layer being a polymethyl methacrylate

Smith et al discloses the second layer being a polymethyl methacrylate or polycarbonate.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show the second layer being a polymethyl methacrylate because polymethyl methacrylate and polycarbonate are well known plastic for

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forming an impact resistant thermoplastic sheet in a multiple layer window as taught by Smith et al.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of Hood et al (5784853).

Mucaria shows all the claimed limitations except for the second layer being of polyethylene terephthalate.

Hood et al discloses the second layer being of polycarbonate materials and the like, the preference being for polyesters such as polyethylene terephthalate (col 4 line 49).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show the second layer being of polyethylene terephthalate because polyethylene terephthalate is a preferred material for forming an interior layer of an insulating glass unit as taught by Hood et al.

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mucaria in view of Ford (4459789).

Mucaria shows all the claimed limitations except for the film being a polyester.

Ford discloses a film being polyester between glass layers (36a, 36b) to transmit light efficiently and reflect radiant energy in the infrared range (col 4 lines 10-15).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Mucaria's structure to show the second layer being of polyester because polyester allows for the efficient transmission of light as taught by Ford.

(10) Response to Argument

With respect to applicant's argument that the limitation of "generally planar" means that the layers are not to be a structure made of two glass layers bonded by a polymer or other material. Examiner respectfully sets forth the following. First of all, a generally planar glass (first, second, or third) layer means a glass structure that is planar and that forms a layer of material. Secondly, the structures disclosed in Mucaria shows each claimed structural limitations as pointed out and clearly labeled in the final office action, and the structures are able to function as claimed; the structures thus meet the 102 requirement for rejection. Thirdly, applicant's specification page 5 lines 10-14, clearly discloses that the third layer could be formed as a laminated structure having a film sandwiched between two juxtaposed layers of glass. Fourthly, applicant is using "comprising" and thus does not restrict or exclude other structures from being present in the reference for rejection. The argument is thus moot.

With respect to applicant's argument that "laminated glass as glass made with plates of plastic or resin or other material between two sheets of glass to prevent shattering; film: as a thin covering or coating, and coating is defined as a layer of a substance spread over a surface for protection or decoration; laminate is defined as a thin plate, sheet, or layer, and that Mucaria does not show the claimed limitations, examiner respectfully disagrees. First of all, a laminate glass is a piece of glass that has a laminate on at least one side. The structure of a laminate glass is not restrictive to a glass structure having two glass layer with a film sandwiched therebetween, and this is demonstrated by reference Ford (4459789). The reference shows a film sandwiched between layers 36a, 36b and yet the reference does not refer to the structure as laminate glass. Secondly, the glass layers and the film as shown by Mucaria, meet the claimed structural limitations and able to function as claimed. Thirdly, the film as demonstrated by Mucaria, meets

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applicant's definition of laminate film, as the layer (8) is spread over the surface of part 7. The scope of the claimed is not sufficiently restrictive to have the laminate film, having a surface mating with a glass layer only, while the other surface remains free of other contacts.

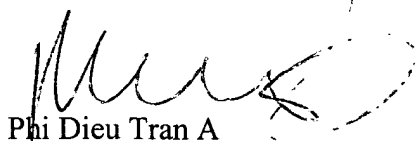
Furthermore, applicant's specification page 5 lines 10-15, further shows the laminate film can be sandwiched between two glass layers. Applicant is also invited to check into the following U.S patents for the terminology of " laminate glass", 6972888, 6811841, 6612091, 6401428. The argument is thus moot.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Phi Dieu Tran A

11/17/06

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